

the first and second digital subscriber loop modems provide, over a frequency spectrum, a network connection between the first and second customer premise devices within the customer premise, the first and second digital subscriber loop modems providing the network connection when the frequency spectrum is under-utilized;

wherein the home network accommodates DSL connections with a telephone company central office during home networking sessions; and

wherein the DSL connections with the telephone company central office share the frequency spectrum used by the network connection between the first and second customer premise devices.

A 2. (Amended) The invention of claim 1 wherein the digital subscriber loop modems utilize a duplex communication channel between them.

3. (Amended) The invention of claim 1 wherein the network connection between the first and second digital subscriber loop modems utilize a digital subscriber loop frequency spectrum to communicate between the first and second customer premise devices.

4. (Amended) The invention of claim 3 wherein the spectrum used for home networking is contained within a power spectral density mask used for the DSL connections.

5. (Amended) The invention of claim 3 wherein a portion of the spectrum used for home networking that corresponds to a DSL downstream spectrum is a function of received power in that spectrum measured during previous DSL connections.

6. (Amended) The invention of claim 1 wherein home networking initiation and connection signaling does not invoke a DSL connection attempt.

7. (Amended) The invention of claim 1 wherein G.hs protocol is utilized to establish the network connection.

8. (Amended) The invention of claim 7 wherein G.hs signaling would be performed over a set of tones specifically for home networking session establishment.

9. (Amended) The invention of claim 7 wherein one digital subscriber loop modem initiates the network connection by signaling with a central office DSL modem and the other digital subscriber loop modem decipher communications but do not participate in the establishment of the network connection.

A¹ 10. (Amended) The invention of claim 9 wherein a flag signal comprises of a 'no common mode' selection in a mode select message followed by a non-standard information field pertaining to establishing the home networking session.

11. (Amended) The invention of claim 1 wherein timing normally provided by a central office modem is provided by the digital subscriber loop modems during the home networking session.

12. (Amended) The invention of claim 1 wherein a digital subscriber loop protocol comprises a G.lite protocol.

13. (Amended) The invention of claim 12 wherein a timing signal is provided in absence of a downstream pilot.

14. (Amended) The invention of claim 13 wherein a DMT carrier provides a timing signal.

A² 17. (Amended) The invention of claim 16 wherein a central office modem addresses a network connection to a particular home network modem using G.hs.

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18. (Amended) The invention of claim 1 wherein the first and second digital subscriber loop modems recognize initiation signals for a digital subscriber loop connection from a central office DSL modem.

19. (Amended) The invention of claim 1 wherein the first and second digital subscriber loop modems recognize initiation signals for a digital subscriber loop connection from a customer premise DSL modem.

21. (Amended) A local area network within a customer premises utilizing digital subscriber line equipment normally used for providing a digital subscriber line, comprising:

a plurality of customer premise digital subscriber line modems providing communication between computer devices;

a first digital subscriber line modem providing communications with a first computer device; and

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a second digital subscriber line modem providing communications to a second computer device;

wherein the first and second digital subscriber line modems communicate to each other, over a frequency spectrum, to provide the local area network without requiring the communications be routed through a central office, the first and second digital subscriber line modems communicating to each other when the frequency spectrum is under-utilized; and

wherein DSL connections with the central office share the frequency spectrum used by the first and second digital subscriber line modems for the communications.

22. (Amended) The invention of claim 21 wherein the first and second digital subscriber line modems utilize existing DSL frequency spectrum to communicate data over the local area network.

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25. (Amended) A local area network providing a network connection within a customer premise, comprising:

a plurality of customer premise digital subscriber line modems providing communication between computer devices;

A⁴ a first digital subscriber line modem providing communications with a first computer device; and

a second digital subscriber line modem providing communications to a second computer device;

wherein the network connection between the first and second digital subscriber loop modems utilize a digital subscriber loop frequency spectrum, when under-utilized, to communicate between the first and second computer devices, the digital subscriber loop frequency spectrum being shared with DSL connections with a telephone company central office.

REMARKS

Applicants have carefully studied the outstanding Office Action. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Double Patenting

The Examiner rejected claims 1-25 under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,396,912. Applicants have filed concurrently herewith a Terminal Disclaimer. Therefore, Applicants respectfully request that the Examiner withdraw the rejection based on double patenting grounds.

Claim Objections

The Examiner objected to claims 1-25 because of informalities. In response, Applicants have amended the claims to correct the informalities identified by the Examiner.